

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING SIGNAL WITH STREET LIGHTING AND INTERCONNECT AT THE INTERSECTION OF MD 124 (MONTGOMERY VILLAGE AVENUE) AND MD 124 (MIDCOUNTRY HIGHWAY) IN MONTGOMERY COUNTY. INSTALLATION OF ACCESSIBLE PEDESTRIAN SIGNALS AND COUNTDOWN PEDESTRIAN SIGNAL HEADS IS PROPOSED ALONG THE NORTH AND EAST LEGS OF THE INTERSECTION. MODIFICATION OF THE EXISTING PEDESTRIAN RAMPS IS PROPOSED TO MEET CURRENT ADA REQUIREMENTS.

MD 124 (MONTGOMERY VILLAGE AVENUE) IS ASSUMED TO RUN IN A NORTH/SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA FOUR (4) PHASE, SEMI-TRAFFIC-ACTUATED MODE. THERE WILL BE NO CHANGE TO THE INTERSECTIONS OPERATION. THE MD 124 (MONTGOMERY VILLAGE AVENUE) THROUGH MOVEMENTS OPERATE CONCURRENTLY. THE EXISTING PEDESTRIAN PHASE MOVEMENTS FOR THE NORTH AND EAST LEGS WILL NOW BE ACTUATED WITH APS PUSHBUTTONS FOR THESE PHASES.

APS OPERATION

FOR MD 124 (MONTGOMERY VILLAGE AVENUE)

- WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WAIT TO CROSS MONTGOMERY VILLAGE AT MIDCOUNTRY, SECOND BUTTON IN MEDIAN CROSSWALK ANGLES LEFT. WAIT"
- WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WAIT TO CROSS MONTGOMERY VILLAGE AT MIDCOUNTRY, SECOND BUTTON IN MEDIAN. WAIT"
- WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WAIT TO CROSS MONTGOMERY VILLAGE AT MIDCOUNTRY, CROSSWALK ANGLES LEFT. WAIT"
- WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WAIT TO CROSS MONTGOMERY VILLAGE AT MIDCOUNTRY. WAIT"
- WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

FOR MD 124 (MIDCOUNTRY HIGHWAY)

- WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WAIT TO CROSS MIDCOUNTRY AT MONTGOMERY VILLAGE. WAIT"
- WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

THE CONTACT PERSONS FOR DISTRICT #3 ARE AS FOLLOWS:

Mr. Brian Young  
District Engineer  
Phone: 301-513-7311

Ms. Anyesha Mookherjee  
Assistant District Engineer - Traffic (Montgomery County)  
Phone: 301-513-7498

Mr. Victor Grafton  
District Utility Engineer  
Phone: 301-513-7350

Mr. Tom Fountain  
Assistant District Engineer - Maintenance  
Phone: 301-513-7304

Mr. Duane Bernard & Kevin Nowak  
Assistant District Engineer - Construction  
Phone: 301-513-7385

THE CONTACT PERSONS FOR THE OFFICE OF TRAFFIC AND SAFETY ARE AS FOLLOWS:

Ms. Corren Johnson  
Chief, Traffic Operations Division  
Phone: 410-787-7650

Mr. Ed Rodenhizer  
Chief, Signal Operations  
Phone: 710-787-7650

Mr. Eugene Bailey  
Chief, Sign Operations  
Phone: 410-787-7670

Mr. Mike Stocker  
Signal Shop Supply Officer  
Phone: 410-787-7696

THE CONTACT PERSONS FOR MONTGOMERY COUNTY ARE AS FOLLOWS:

Vacant  
Montgomery County Signal Operations Manager  
Phone: 301-279-1291

Mr. Kamal Hamud  
Montgomery County TMC Center  
Phone: 240-777-8761

The Power Company Representative is:  
Potomac Electric Power Company  
201 West Gude Drive  
Rockville, Maryland 20850  
Phone: 301-548-4332

EQUIPMENT LIST 'A'

EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

CATEGORY NO	QUANTITY	DESCRIPTION
900000	1 EA	CONTROLLER CABINET, SIZE "S" W/CTRL, VIDEO INT. 1-8 CAM
900000	1 EA	CABINET EXTENSION BASE, SIZE "S"
900000	1 EA	4 CHANNEL DETECTOR AMPLIFIER
900000	1 EA	UPS EQUIPMENT FOR "S" CABINET
900000	101 SF	SHEET ALUMINUM GROUND MOUNTED SIGN
	2 EA	M11-2 (36"x36")
	1 EA	M16-7p (L) (24"x12")
	1 EA	M16-7p (R) (24"x12")
	3 EA	M3-1 (24"x12")
	1 EA	M3-1 (30"x15")
	5 EA	M1-5(1) (30"x24")
	1 EA	M1-5(1) (48"x36")
	2 EA	M3-3 (24"x12")
	2 EA	M6-2R (21"x15")
	2 EA	M5-1 (21"x15")
	1 EA	M6-1 (21"x15")
	1 EA	M6-1 (30"x24")
	1 EA	R4-7 (18"x30")
	1 EA	R5-1 (30"x30")
	1 EA	OM1-3 (18"x18")

900000	54 SF	SHEET ALUMINUM POLE MOUNTED SIGN
	6 EA	R10-3(1) (9"x15")
	2 EA	M1-5(6) (48"x72")

EQUIPMENT LIST 'B'

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

CATEGORY NO	QUANTITY	DESCRIPTION
100000	1 EA	MAINTENANCE OF TRAFFIC (PER INTERSECTION)
201032	26 CY	CLASS 2 EXCAVATION
203030	3 CY	TEST PIT EXCAVATION
585617	45 LF	5 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585621	485 LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585625	50 LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585700	450 LF	REMOVAL OF EXISTING PAVEMENT MARKING LINES, ANY WIDTH
600000	240 LF	TYPE A COMBINATION CURB AND GUTTER ANY HEIGHT OR DEPTH
600000	140 LF	TYPE A CURB ANY HEIGHT OR DEPTH
655105	1200 SF	5 INCH CONCRETE SIDEWALK
655120	120 SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
704345	65 SY	PLACING FURNISHED TOPSOIL 4 INCH DEPTH
708220	65 SY	TURFGRASS SOD ESTABLISHMENT
800000	1 EA	2-WIRE APS CENTRAL CONTROL UNIT
800000	1 EA	ADJUST HANDHOLE TO GRADE AND REPLACE FRAME AND COVER
800000	6 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
800000	6 EA	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
800000	6 EA	5 FOOT OR 10 FOOT PEDESTAL POLE WITH BREAKAWAY COUPLINGS, FOUNDATION & GROUND ROD
800000	1 EA	REMOVE & DISPOSE OF EXISTING SIGNAL EQUIPMENT (PER SIGNALIZED INTERSECTION LOCATION)
800000	1 EA	INSTALL CONTROLLER AND CABINET BASE MOUNT (ANY SIZE) INCLUDING F&I FOUNDATION & GROUND ROD
800000	330 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED OR SLOTTED
800000	130 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
800000	210 LF	WOOD SIGN SUPPORTS UP TO 4 INCH X 6 INCH
800000	155 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
800000	1 EA	THIRD PARTY CONCRETE TESTING (PER INTERSECTION)
802501	450 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
811001	2 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
860284	12 EA	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
861105	1465 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	1500 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)

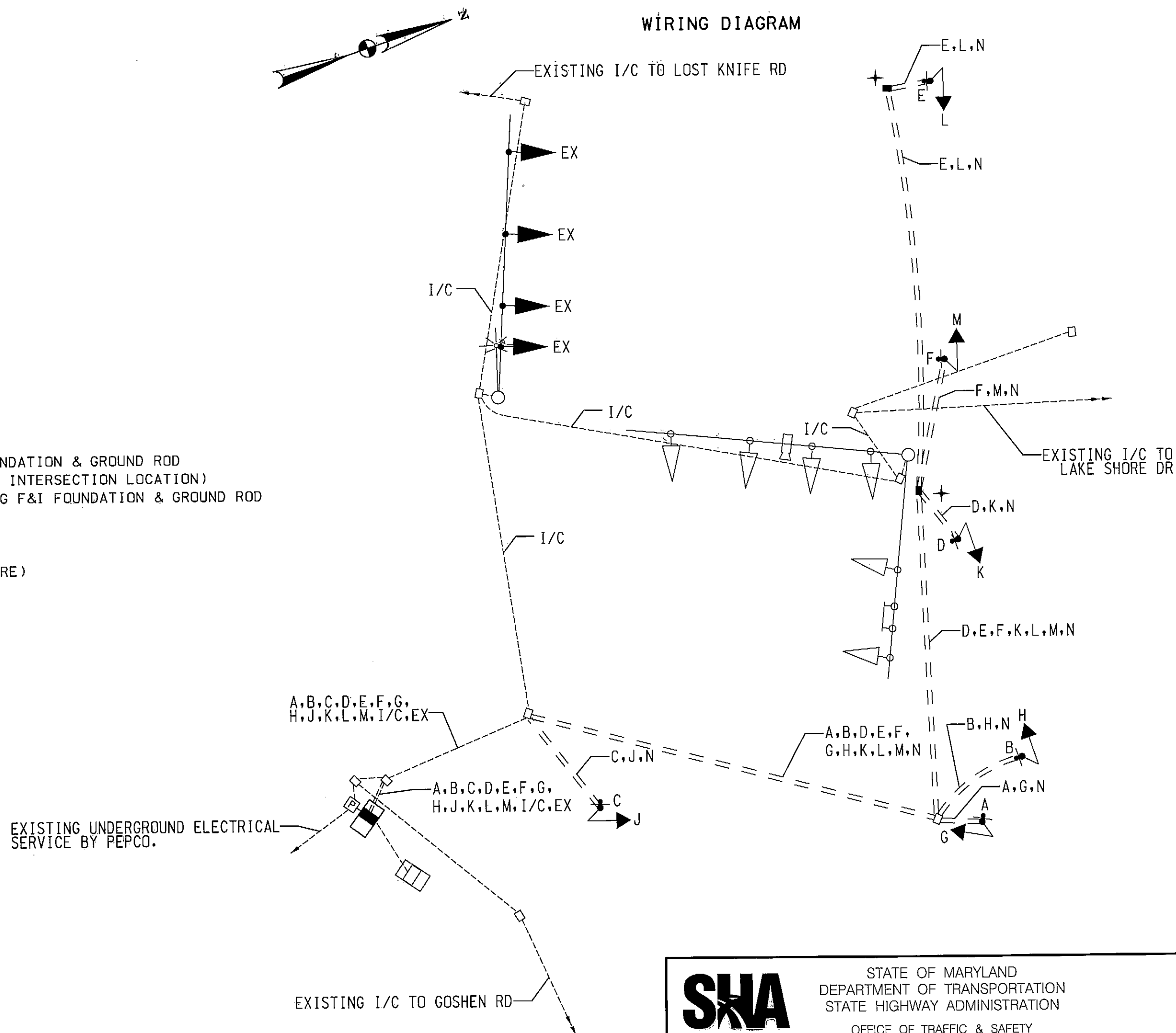
EQUIPMENT LIST 'C'

MONTGOMERY FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

PHASE CHART

PHASE CHART	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE 2 + 5	R	R	-G-	-G-	G	G	-R-	-R-	-G-	-G-	DW	DW	DW	DW	DW	DW
PHASE 5 CHANGE	R	R	-Y-	-Y-	G	G	-R-	-R-	-Y-	-Y-	DW	DW	DW	DW	DW	DW
PHASE 2 + 6	G	G	-R-	-R-	G	G	-R-	-R-	-R-	-R-	WK	WK	DW	DW	DW	DW
PED CLEARANCE	G	G	-R-	-R-	G	G	-R-	-R-	-R-	-R-	FL/DW	FL/DW	DW	DW	DW	DW
PHASE 2 + 6 CHANGE	Y	Y	-R-	-R-	Y	Y	-R-	-R-	-R-	-R-	DW	DW	DW	DW	DW	DW
PHASE 4	R	R	-R-	-R-	R	R	-G-	-G-	-G-	-G-	DW	DW	DW	DW	DW	DW
PHASE 4 CHANGE	R	R	-R-	-R-	R	R	-Y-	-Y-	-Y-	-Y-	DW	DW	DW	DW	DW	DW
PHASE 4 ALT.	R	R	-R-	-R-	R	R	-G-	-G-	-R-	-R-	DW	DW	WK	WK	WK	WK
PED CLEARANCE	R	R	-R-	-R-	R	R	-G-	-G-	-R-	-R-	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
PHASE 4 ALT. CHANGE	R	R	-R-	-R-	R	R	-Y-	-Y-	-R-	-R-	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/-R	FL/-R	FL/Y	FL/Y	FL/-R	FL/-R	FL/-R	FL/-R	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



WIRING KEY

- A,B,C,D,E,F — ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)  
G,H,I,J,K,L,M — ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)  
N — NO. 6 AWG STRANDED BARE COPPER GROUND WIRE  
EX — USE EXISTING WIRE  
I/C — EXISTING INTERCONNECT



RJM ENGINEERING, INC.  
CONSULTING ENGINEERS  
ELLICOTT CITY, MARYLAND



STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
MD 124 (MONTGOMERY VILLAGE AVENUE) AT MD 124 (MIDCOUNTRY HIGHWAY)  
GAITHERSBURG, MARYLAND

GENERAL INFORMATION SHEET

SCALE	NTS	ADVERTISED DATE	JULY 2013	CONTRACT NO.	XY2383185
DESIGNED BY	J. Gordon	COUNTY	MONTGOMERY		
DRAWN BY	J. Gordon	LOGMILE	15012464.34		
CHECKED BY	P. Westcott	TIMS NO.	M005		
F.A.P. NO.		TOD NO.			
TS NO. 2412D-GI	DRAWING	SG-03	OF 03	SHEET NO.	3 OF 3